

University of Maine at Farmington )  
Franklin County )  
Farmington, Maine )  
A-603-71-E-N )

**Departmental  
Findings of Fact and Order  
Air Emission License  
After-the-Fact**

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

**A. Introduction**

The University of Maine at Farmington (UMF) located in Farmington, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their educational facility.

**B. Emission Equipment**

UMF is authorized to operate the following equipment:

**Fuel Burning Equipment**

<b><u>Equipment</u></b>	<b><u>Maximum Capacity (MMBtu/hr)</u></b>	<b><u>Maximum Firing Rate (gal/hr)</u></b>	<b><u>Fuel Type, % sulfur</u></b>	<b><u>Stack #</u></b>
H2250	3.5	25.0	#2 fuel oil, 0.35%	1STN
H6488	2.77	19.80	#2 fuel oil, 0.35%	1STN
H1895	3.33	23.75	#2 fuel oil, 0.35%	2PUR
H2271	3.9	300 lb/hr	coal	3PUR
H1897	1.37	9.75	#2 fuel oil, 0.35%	4MLT
H1980	4.02	28.70	#2 fuel oil, 0.35%	5SCT
H2593	4.02	28.70	#2 fuel oil, 0.35%	5SCT
H2875	2.6	18.55	#2 fuel oil, 0.35%	6LKWD
H2876	2.6	18.55	#2 fuel oil, 0.35%	6LKWD
H2598	3.29	23.50	#2 fuel oil, 0.35%	43OL
H2599	3.29	23.50	#2 fuel oil, 0.35%	43OL
H753	2.25	18.0	#2 fuel oil, 0.35%	10MRL
H754	4.55	350 lb/hr	coal	10MRL
H2270	2.1	15.00	#2 fuel oil, 0.35%	11AT
H6071	1.27	9.10	#2 fuel oil, 0.35%	12RTP
H2268	1.48	10.60	#2 fuel oil, 0.35%	12RTP
H7056	1.12	8.00	#2 fuel oil, 0.35%	13MAN

H7057	1.12	8.00	#2 fuel oil, 0.35%	13MAN
H7058	1.12	8.00	#2 fuel oil, 0.35%	13MAN
H3163	3.50	25.00	#2 fuel oil, 0.35%	23RLC
H8183	3.50	25.00	#2 fuel oil, 0.35%	23RLC
H3161	2.95	21.10	#2 fuel oil, 0.35%	24DAK
H3162	2.95	21.10	#2 fuel oil, 0.35%	24DAK

### Electrical Generation Equipment

<u>Equipment</u>	<u>Rating (MMBtu/hr)</u>	<u>Firing Rate (gal/hr)</u>	<u>Pollution Controls</u>	<u>Stack #</u>
OLDE	1.10	8.10	none	44OLDE

#### C. Application Classification

The previous air emission license for UMF expired on May 22, 2001. A complete application was not submitted on time, therefore UMF is considered to be an existing source applying for an after-the-fact renewal. The facility is determined to be a minor source and the application has been processed through Chapter 115 of the Department's regulations.

## II. BEST PRACTICAL TREATMENT (BPT)

#### A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

#### B. Boiler Emission Sources

UMF operates all of the boilers for facility heating and hot water needs. Each of the following boilers burn #2 fuel oil, with a maximum sulfur content not to exceed 0.35% by weight: H2250, H6488, H1895, H2271, H1980, H2593, H2875, H2876, H2598, H2599, H753, H2270, H2268, H6071, H7056, H7057, H7058, H3163, H8183, H3161 and H3162. Boilers H2271 and H754 burn bituminous or anthracite coal with a sulfur content not to exceed 0.8% and 0.64% by weight, respectively.

A summary of the emission factors for each of the pollutants is discussed below:

1. PM and PM<sub>10</sub> emission rates are based upon MEDEP Chapter 103 for the following units: 0.30 lb/MMBtu for coal-fired units H2271 and H754; 0.20 lb/MMBtu for oil-fired units (installed prior to December 22, 1982) H2250, H1895, H1980, H2593, H2875, H2876, H2598, H2599, H3163 and H3164. PM and PM<sub>10</sub> emission rates are based upon AP-42 factors for units (rated at less than 3.0 MMBtu/hr) H6488, H1897, H2875, H2876, H753, H2270, H2268, H6071, H7056, H7057, H7058, H3161 and H3162.
2. SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emission rates are based upon AP-42 factors dated 9/98 for fuel oil combustion, 9/98 for bituminous coal combustion, and 10/96 for anthracite coal combustion.
3. Visible emissions from each boiler shall not exceed 20% opacity on a six-minute block average basis.
4. Visible emissions from each combined stack shall not exceed 40% opacity on a six-minute block average basis, except for no more than 3 six-minute block averages in any three-hour period.

C. Diesel Generator

The stand-by Diesel Engine has a maximum rated input capacity of 1.1 MMBtu/hr firing diesel fuel with a maximum sulfur content of 0.05% by weight. The Diesel Engine is used for emergency purposes only, and is limited to 500 hours of operation per year, based on a 12-month rolling total.

A summary of the emission factors for each of the pollutants is discussed below:

1. PM and PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emission rates are based upon AP-42 factors dated 10/96 for stationary internal combustion engines.
2. Visible emissions from the Diesel Engine shall be limited to 20% opacity on a six-minute block average basis, except for no more than 2 six-minute block averages in any three-hour period.

D. Definition of "Emergency"

Per MEDEP Chapter 100, the definition of emergency for Chapter 115 purposes is the following:

"... any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a

technology based emission limitation under the license, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.”

E. Annual Emission Restrictions

UMF shall be restricted to the following annual emissions, based on a 12-month rolling total:

**Total Allowable Annual Emission for the Facility**  
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	5.2
PM <sub>10</sub>	5.2
SO <sub>2</sub>	15.1
NO <sub>x</sub>	7.3
CO	1.8
VOC	0.2

### III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Based on the total facility emissions, UMF is below the emissions level required for modeling and monitoring.

### ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-603-71-E-N, subject to the following conditions:

### STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee’s premises during business hours, or any time during which

- any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
  - (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
  - (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
  - (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. \ 353.
  - (6) The license does not convey any property rights of any sort, or any exclusive privilege.
  - (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
  - (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
  - (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.

- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - b. pursuant to any other requirement of this license to perform stack testing.
  - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to

a demonstration of compliance under normal and representative process and operating conditions.

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

## **SPECIFIC CONDITIONS**

- (16) Boilers
- A. Fuel use shall not exceed 600,000 gallons/yr #2 fuel oil with a maximum sulfur content of 0.35% by weight, and 500 tons/year combined total of bituminous and anthracite coal, based on a 12-month rolling total, with a maximum sulfur content of 0.8% and 0.64%, respectively. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total.
- B. Visible emissions from each boiler shall not exceed 20% opacity on a six-minute block average basis.
- C. Emissions shall not exceed the following:

Equipment		PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
H2250	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	0.70	0.70	1.25	0.50	0.13	0.01
H6488	lb/hr	0.03	0.03	0.99	0.40	0.10	0.01
H1895	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	0.67	0.67	1.18	0.48	0.12	0.01

H2271	lb/MMBtu	0.30	-	-	-	-	-
	lb/hr	1.17	1.17	4.56	2.70	0.75	0.05
H1897	lb/hr	0.02	0.02	0.49	0.20	0.05	0.01
H1980	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	0.81	0.81	1.43	0.58	0.15	0.01
H2593	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	0.81	0.81	1.43	0.58	0.15	0.01
H2875	lb/hr	0.03	0.03	0.93	0.38	0.10	0.01
H2876	lb/hr	0.03	0.03	0.93	0.38	0.10	0.01
H2598	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	0.66	0.66	1.17	0.47	0.12	0.01
H2599	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	0.66	0.66	1.17	0.47	0.12	0.01
H753	lb/hr	0.03	0.03	0.90	0.36	0.09	0.01
H754	lb/MMBtu	0.30	-	-	-	-	-
	lb/hr	1.37	1.37	5.32	3.15	0.89	0.06
H2270	lb/hr	0.02	0.02	0.75	0.30	0.08	0.01
H6071	lb/hr	0.02	0.02	0.45	0.19	0.05	0.01
H2268	lb/hr	0.02	0.02	0.53	0.22	0.06	0.01
H7056	lb/hr	0.01	0.01	0.40	0.16	0.04	0.01
H7057	lb/hr	0.01	0.01	0.40	0.16	0.04	0.01
H7058	lb/hr	0.01	0.01	0.40	0.16	0.04	0.01
H3163	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	0.70	0.70	1.25	0.50	0.13	0.01
H3164	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	0.70	0.70	1.25	0.50	0.13	0.01
H3161	lb/hr	0.04	0.04	1.05	0.43	0.11	0.01
H3162	lb/hr	0.04	0.04	1.05	0.43	0.11	0.01

- (17) Emergency Diesel Stand-by Engine
- The emergency diesel stand-by engine shall be limited to 500 hours per year of operation, based on a 12-month rolling total. An hour meter shall be installed and operated on the emergency diesel stand-by engine.
  - UMF shall keep a log which records the hours of operation for the Diesel Stand-by Engine, on a monthly basis, as well as a 12-month rolling total.
  - Visible emissions from the Diesel Stand-by Engine shall not exceed 20% opacity on a six-minute block average basis, except for no more than 2 six-minute block averages in any three-hour period.
  - Emissions from the emergency diesel stand-by engine shall not exceed the following:



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Pollutant	lb/hr	Tons/yr
PM	0.14	0.1
PM <sub>10</sub>	0.14	0.1
SO <sub>2</sub>	0.33	0.1
NO <sub>x</sub>	5.00	1.3
CO	1.08	0.3
VOC	0.40	0.1

(18) The term of this Order shall be for five (5) years from the signature below.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: August 7, 2001

Date of application acceptance: August 14, 2001

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Elisha McVay, Bureau of Air Quality.